SHEET INDEX

CONTENTS	SHEET NO.	SHEET ISSUE
SHEET INDEX SYMBOL MANUFACTURING REFERENCES NOTES USED-ON TABLE CURRENT DRAIN RECORD OF CHANGES	1	2
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RECORD OF CHANGES

DWG ISS	PREV FURN	STD	MFR DISC	SEE NOTE

SYMBOL
SERIAL PERIPHERAL INTERFACE B
ELEMENT IDENT
A

TERM. MOD	FUNCT	TERM.	LOC
101STO	I	309	2A7
INF000	I	215	2A7
INF010	I	314	2A7
INF020	I	211	2A6
INF030	I	310	2A6
INF040	I	116	2A5
INF050	I	214	2A5
INF060	I	205	2A4
INF070	I	304	2A4
INF080	I	301	2A4
INF090	I	003	2A3
INF100	I	010	2A2
INF110	I	109	2A2
INF120	I	207	2A2
INF130	I	307	2A1
INF140	I	312	2A1
INF150	I	212	2A0
INFPHO	I	203	2A0
INFPLO	I	206	2A3
MYRAN	I	311	3A0
MYRAP	I	213	3A0
MYRBN	I	208	3A1
MYRBP	I	308	3A0
PLIØBO	I	317	2A0
RSET01	I	006	3A3
STRTR1	I	217	3A7
B000	Ø	113	2G7
B010	Ø	014	2G7
B020	Ø	100	2G6
B030	Ø	117	2G6
B040	Ø	016	2G5
B050	Ø	101	2G5
B060	Ø	001	2G4
B070	Ø	104	2G4
B080	Ø	008	2G3
B090	Ø	313	2G3
B100	Ø	114	2G2
B110	Ø	103	2G2
B120	Ø	[illegible]04	2G2
B130	Ø	[illegible]	2G1
B140	Ø	018	2G1
B150	Ø	002	2G0
BPHO	Ø	102	2G0
BPLO	Ø	107	2G4
MYSAN	Ø	118	3H0
MYSAP	Ø	218	3H0
MYSBN	Ø	219	3H1
MYSBP	Ø	318	3H1
RSNPOA	Ø	105	2G6
SCB010	Ø	017	2G7
SCB020	Ø	115	2G7
SPE1	Ø	315	3N7
STØP80	Ø	005	2G8
3VI	Ø	201	309
+5	P	000,119	3H5
GRD	G	200,319	3H7

SYSTEM USED ON	DESIGN CONTROL
COMMON SYSTEMS	IN

CURRENT DRAIN: 600mA

NOTES:

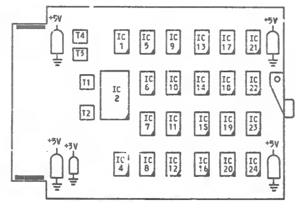
1. ⏚ GROUND RETURN
2. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE VALUES ARE IN OHMS
   CAPACITANCE VALUES ARE IN MICROFARADS
   VALUES PRECEDED BY THE SYMBOL +(PLUS) OR −(MINUS) ARE IN VOLTS
3. BATTERY AND GROUND TERMINALS FOR INTEGRATED CIRCUITS

IC CODE	BAT. TERM.	GRD TERM.
41BP	16	8
41CF	16	7,8
175H	1,32	16,17
KS-21688 L1	14	7
KS-21688 L3	14	7
KS-21688 L4	14	7
KS-21688 L5	14	7
KS-21688 L6	14	7
KS-21687 L1	16	8

4. BATTERY AND GROUND TERMINALS FOR THIS CIRCUIT PACK ARE AS FOLLOWS:

FUNCTION	TERMINAL
+5	000,119
GRD	200,319

5. HORIZONTAL MOUNTING CENTERS AT 0.50 INCH.
6. INTEGRATED CIRCUIT AND TRANSFORMER LOCATION GUIDE: (COMPONENT SIDE SHOWN)



UNMARKED COMPONENTS ARE FILTER CAPACITORS

DWG ISSUE	EE OR CD ISSUED	DATE ISSUE		APPD
1	—	10-2-74	LRE IRE	RWF MTS RFG
2B1	—	12-31-75	APPL LRE	CE LEG RFG

SUPPORTING INFORMATION

CATEGORY	NO.
CIRCUIT PACK CODE	CPS-JK6
CONNECTOR ON FRAME	947C OR 947A
SERIES FOR LATEST CLASS A CHANGE. (ANY HIGHER SERIES IS ACCEPTABLE).	
ACCEPTABLE SERIES	1

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING ONLY THOSE SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE FIRST SHEET.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE FIRST SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

ISSUE 2B1

1N9B

JK6 CIRCUIT PACK

SERIAL PERIPHERAL INTERFACE B CIRCUIT

AT&TCO STANDARD

CPS-JK6
4 SHEETS

② 6S

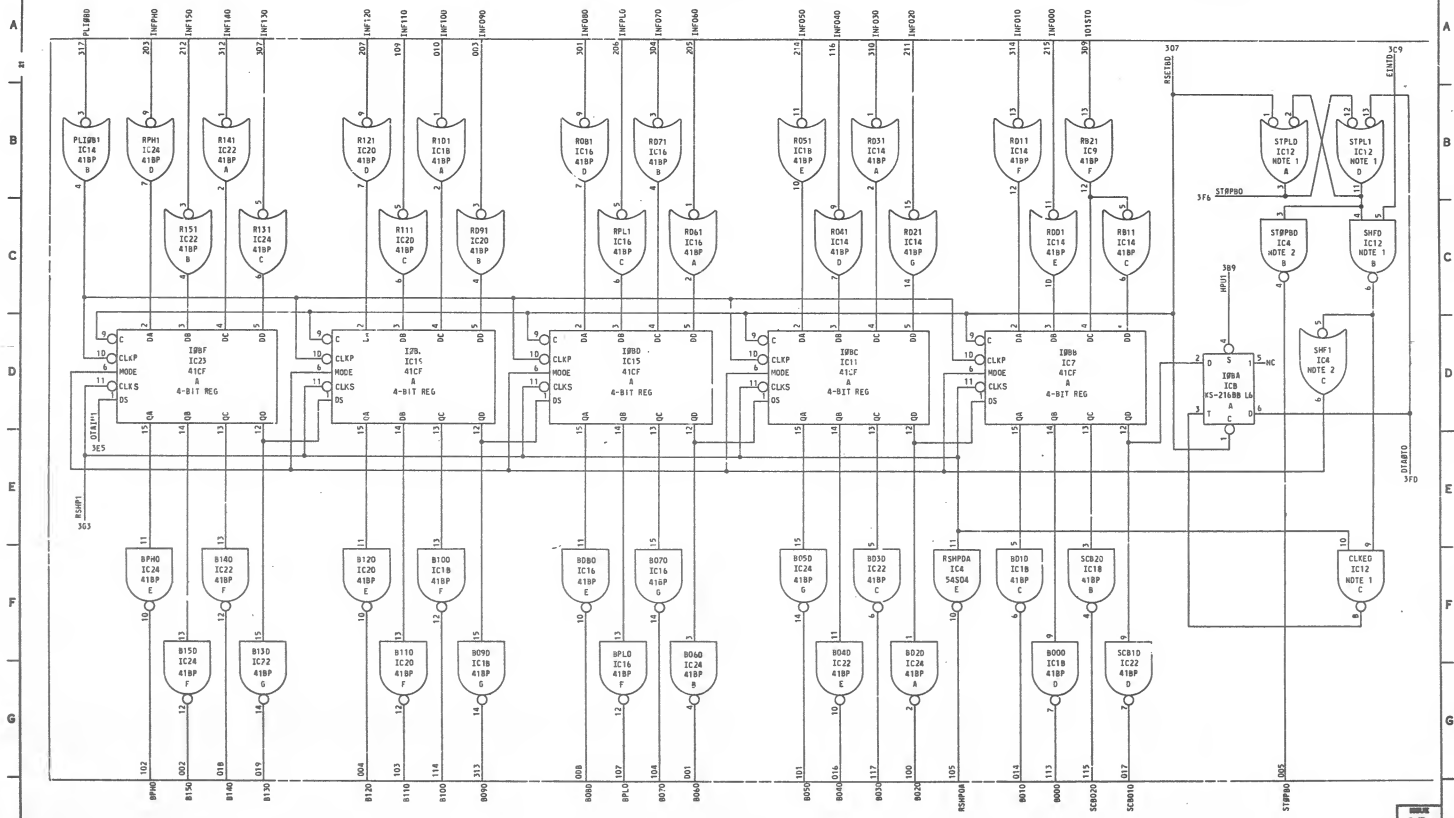
BELL TELEPHONE LABORATORIES INCORPORATED

PART OF CPS JK6

SERIAL PERIPHERAL INTERFACE B CIRCUIT

SHEET NOTES:

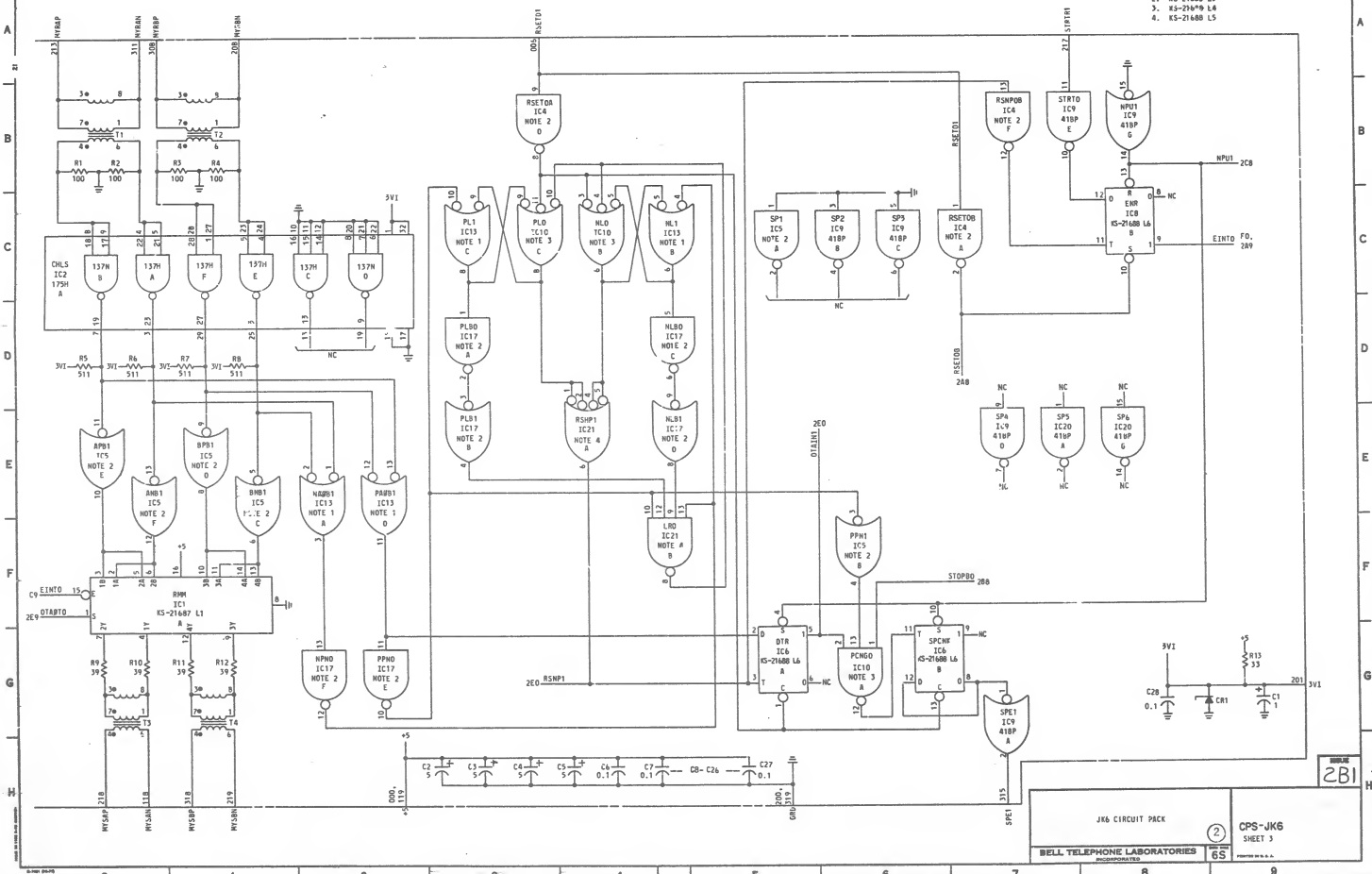
1. KS-21688 L1
2. KS-21692 L3



2B1

JK6 CIRCUIT PACK	CPS-JK6 SHEET 2
BELL TELEPHONE LABORATORIES INCORPORATED	2 6S

CPS-JK6


PART OF CPS JK6
SERIAL PERIPHERAL INTERFACE B CIRCUIT
SHEET NOTES:
1. KS-21688 L1
2. KS-21688 L3
3. KS-21690 L4
4. KS-21688 L5
MYBAP
MYBAN
MYBBP
MYBBN
RSETOA IC4 NOTE 2 D
RSETOB IC4 NOTE 2 A
RSETO1
STRTO IC9 418P E
STRTR
NPU1 IC9 418P G
NPU1 2C8
RSNPOB IC4 NOTE 2 F
SP1 IC5 NOTE 2 A
SP2 IC9 418P B
SP3 IC9 418P C
SP4 IC9 418P D
SP5 IC20 418P A
SP6 IC20 418P G
NC
EINTO FO. 2A9
ENR IC8 KS-21688 L6 B
CHLS IC2 175H A
137H B
137H A
137H F
137H E
137H C
137H D
5VI
3VI
R1 100
R2 100
R3 100
R4 100
T1
T2
T3
T4
R5 511
R6 511
R7 511
R8 511
PL1 IC13 NOTE 1 C
PLO IC10 NOTE 3 C
NLO IC10 NOTE 3 B
NL1 IC13 NOTE 1 B
PLBO IC17 NOTE 2 A
PLB1 IC17 NOTE 2 B
NLBO IC17 NOTE 2 C
NLB1 IC17 NOTE 2 D
RSHP1 IC29 NOTE 4 A
LBO IC21 NOTE A B
APB1 IC5 NOTE 2 E
BPB1 IC5 NOTE 2 D
ANB1 IC5 NOTE 2 F
BNB1 IC5 NOTE 2 C
NAUB1 IC13 NOTE 1 A
PAUB1 IC13 NOTE 1 D
RMM IC1 KS-21687 L1 A
C9 EINTO
2E9 OTABTO
NPNO IC17 NOTE 2 F
PPNO IC17 NOTE 2 E
2E0 RSNP1
2E0 OTAIN1
PPN1 IC5 NOTE 2 B
STOPBO 2B8
DTR IC6 KS-21688 L6 A
PCNGO IC10 NOTE 3 A
SPCNG IC6 KS-21688 L6 B
SPE1 IC9 418P A
2D1 3V1
R13 33
C28 0.1
CR1
C1
C2 5
C3 5
C4 5
C5 5
C6 0.1
C7 0.1
C8-C26
C27 0.1
MYSAP
MYSAN
MYSBP
MYSBN
SPE1
JK6 CIRCUIT PACK
BELL TELEPHONE LABORATORIES INCORPORATED
CPS-JK6
SHEET 3
2B1
CPS-JK6

PART OF CPS JK6

SERIAL PERIPHERAL INTERFACE B CIRCUIT

COMPONENT LIST
INTEGRATED CIRCUIT

LOC	IC1	IC2	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12	IC13
CODE	~~546158~~ KS-21687 L3	175H	~~54504~~ KS-21688 L3	~~54504~~ KS-21688 L3	~~54674~~ KS-21688 L6	41CF	~~54574~~ KS-21638 L6	41BP	~~54510~~ KS-21688 L4	41CF	~~54500~~ KS-21688 L1	~~54500~~ KS-21688 L1
ELEM IO	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC
A	RMM 3F0	CHLS 3C0	RSETCC 3C7	SP1 3C5	OTR 3G5	1@88 2D7	1@BA 2D6	SPE1 3H7	PCHGO 3G6	1@BC 2D5	STPLO 2B8	NAMB1 3E2
B			STAP80 2C8	PPM1 3F6	SPCHK 3G6		ENR 3C8	SP2 3G6	NLO 3C4		SHFO 2C9	NL1 3C4
C			SHF1 2D9	BNB1 3E1				SP3 3G6	PLO 3C3		CLKEO 2F9	PL1 3C3
D			RSETOA 3B3	BPB1 3E1				SP4 3E7			STPL1 2B9	PAMB1 3E2
E			RSHPOA 2F5	APB1 3E0				STRTD 3B7				
F			RSHPOA 3B7	ANB1 3E0				RSET 2B7				
G								HPU1 3B8				

LOC	IC14	IC15	IC16	IC17	IC18	IC19	IC20	IC21	IC22	IC23	IC24
CODE	41BP	41CF	41BP	~~54504~~ KS-21688 L3	41BP	41CF	41BP	~~54540~~ KS-21688 L5	41BP	41CF	41BP
ELEM IO	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC	DESIG SH LOC
A	RO31 2B6	1@BD 2D4	RO61 2C4	PLB0 3D3	R101 2B2	1@BE 2D2	SP9 3E7	RSHP1 3E4	R141 2B1	1@BF 2D1	BQ20 2F6
B	PLI@80 2B0		RO71 2B4	PLBL 3E3	SCB20 2F7		R091 2C3	LSO 3F4	R151 2C1		BQ60 2=4
C	RB11 2C7		RPL1 2C4	NLB0 3D4	B010 2F7		R111 2C2		B050 2F6		R131 2C1
D	RO41 2C5		RO81 2B3	NLB1 3E4	B000 2F7		R121 2B2		SCB10 2F7		RPM1 2B0
E	RO01 2C7		BQB0 2F4	PPM0 3G2	B091 2B5		B120 2F2		B040 2F5		BPM0 2F0
F	WO11 2B7		BPL0 2F4	NPM0 3G2	B100 2F2		B110 2F2		B140 2F1		B150 2F1
G	RO21 2C6		BO70 2F4		B090 2F3		SP6 3E7		G130 2G1		BQ30 2F5

CAPACITOR

DESIG	CODE
C1	6004,1
[4] C2-C5	6018,5
[23] C6-C28	KS-19774 L5,0.1

DIODE

DESIG	CODE
CR1	~~1N5225B~~ KS-21761 L1

RESISTOR

DES'G	CODE
[4] R1-R4	KS-20616 L18,100
[4] R5-R8	.511
[4] R9-R12	.39
R13	KS-20616 L18,33

TRANSFORMER

DESIG	CODE
[4] T1-T4	26646

CIRCUIT DESCRIPTION

THIS PACK CONTAINS A 21-BIT SHIFT REGISTER TO RECEIVE A SERIAL MESSAGE FROM THE JACC. BIPOLAR PULSES ARE RECEIVED FROM EITHER CC VIA THE A OR B INPUT PORTS. CHLS CONVERTS THE RECEIVED PULSES TO TTL LEVELS. THE CLOCKPULSE (RSHP1) RECOVERED FROM THE BITSTREAM IS NOMINALLY 75 NSEC WIDE. THE RECOVERED DATA (OTAIN1) IS HELD STABLE OVER THE TRAILING EDGE OF THE RSHP1 PULSE BY THE DTR F/F.

THE 21-BIT MESSAGE IS CHECKED FOR SINGLE ERRORS BY THE PARITY CHECK F/F (SPCHK). A STOP LATCH IS SET WHEN THE FIRST ONE BIT IS CLOCKED INTO THE IOMB F/F. THE SHIFT REGISTER CONTENTS ARE FROZEN BECAUSE THE REGISTER IS SET INTO THE PARALLEL LOAD MODE. 20-BITS OF THE REGISTER ARE AVAILABLE FOR DECODING PURPOSES. THE STATES OF THE 19 INPUT LEADS ARE LOADED INTO THE REGISTER AT THE TRAILING EDGE OF A PULSE ON LEAD PLIB00 TO SEND THE 21-BIT MESSAGE BACK TO THE CC THE ENR F/F IS RESET BY A HIGH INPUT ON LEAD STRTR1. THE ENR F/F ENABLES THE REPLY MESSAGE MODULATOR RM4 AND PLACES THE REGISTER INTO THE SERIAL SHIFT MODE. THE DATA APPEARING AT THE OUTPUT OF IOBA (OTAOTO) MODULATES THE TWO CLOCKPULSES TO GENERATE BIPOLAR PULSES AT THE A OR B OUTPUT PORTS.

THE CIRCUIT IS INITIALIZED BY A HIGH INPUT ON LEAD RSET01. R13 AND CR1 GENERATE THE 3-VOLT SUPPLY REQUIRED BY THE 175H LEVEL SHIFTERS CHLS.

ISSUE 2B1

JK6 CIRCUIT PACK (2) CPS-JK6 SHEET 4

BELL TELEPHONE LABORATORIES INCORPORATED 6S

CPS-JK6